

REMARKS

This Amendment is being filed in response to the Office Action mailed on December 29, 2009 which has been reviewed and carefully considered. Reconsideration and allowance of the present application in view of the amendments made above and the remarks to follow are respectfully requested.

Claims 1-4 are pending in the application. Claim 1 is an independent claim.

In the Office Action, claims 1-4 are rejected under 35 U.S.C. §103(a) over U.S. Patent Publication No. 2005/0120902 to Adams ("Adams") in view of Applicant's Admitted Prior Art (AAPA) and U.S. Patent Publication No. 2003/0047535 to Schueller ("Schueller"). It is respectfully submitted that claims 1-4 are patentable over Adams in view of AAPA and Schueller for at least the following reasons.

In the Final Office Action on page 3, the last paragraph, it is admitted that Adams does not teach a barrier layer. However, the Final Office Action goes on to reference AAPA at paragraph [0009] of the specification (see, specification, page 3, lines 6-21) as disclosing a barrier layer, concluding that a combination of AAPA with Adams is obvious to those skilled in the art.

This position of the Final Office Action is respectfully refuted. It is respectfully submitted that it is only through hindsight reconstruction of claim 1, that the incite to combine Adams with AAPA is provided. Moreover, the Office Action fails to provide any description of the motivation to combine Adams and AAPA.

As explained in the present specification, page 3, lines 6-21, the AAPA references describe microcontact printing, where the ink is transferred from the contact surface, which is being modified to improve its compatibility with the ink. In particular, the present specification on page 3, lines 11-13 states the following:

... these stamps have been developed for use in the field of microcontact printing, where the ink is transferred from the contact surface of the protruding feature to the surface of the substrate, ... (emphasis added).

In other words, AAPA relied upon by the Examiner teaches away from claim 1 as the AAPA teaches transferring the ink from the contact surface of the protruding feature to the surface of the substrate not “transferring the ink from the edge of the protruding feature to the surface of the second substrate” as recited in claim 1. Moreover, there is no motivation for these skilled in the art to combine AAPA that teaches transferring ink from the contact surface with Adams.

Further, there is no teaching in the AAPA of introducing a barrier layer preventing molecules of the ink from penetrating the elastomeric stamp as recited in claim 1. As stated in the present application, page 3, lines 15-21 (emphasis added):

Langmuir, volume 19, pages 5475-5483 (2003), discloses a PDMS stamp having an oxidized surface layer acting as a barrier layer to prevent the diffusion from low-weight PDMS oligomers from the stamp material to the surface of the substrate, to avoid significant pollution of the self-assembled monolayer (SAM) of ink molecules on the surface of the substrate, which can deteriorate the properties of the SAM, as for instance has been reported in Langmuir, vol. 18, pages 1518-1527 (2002).

As is clear from Langmuir, the barrier layer is applied to the stamp to prevent

material of the stamp from being transferred to the substrate during the stamping process.

It is respectfully submitted that there is no teaching in the AAPA of "providing a barrier layer on the protruding feature and the bulk surface carrying a barrier layer ... the barrier layer preventing molecules of the ink from penetrating the elastomeric stamp" as recited in the claims.

It is respectfully submitted that it is the Applicants that came to "the realization that a modified surface layer can also act as a barrier layer preventing the ink molecules from penetrating the stamp material on the timescales of the substrate patterning process, which is a realization that has not been made in the aforementioned prior art documents." (E.g. see, preset application, page 3, lines 23-26.)

It is respectfully submitted that there is no motivation in Adams to look to AAPA to provide a barrier layer that prevents molecules of the ink from penetrating the elastomeric stamp.

In addition, while the Response to Arguments section of the Final Office Action takes a position that (emphasis added) "[r]eplacing the process of drying the ink and solvent with the equivalent process of wiping with an absorbent substrate as taught by Schueller et al. still allows for all of the ink to be removed" (see, Final Office Action, page 2), it is respectfully submitted that this process, even as modified from the prior art based on the position taken in the Final Office Action, does not teach disclose or suggest "removing the elastomeric stamp from the surface of the first substrate such that none of the ink remains

on the contact surface of the protruding feature due to the acts of contacting, transferring all of the ink from the contact surface and removing ..." as recited in claim 1.

Schueller is introduced for allegedly showing other elements of the claims and as such, does nothing to cure the deficiencies in Adams and AAPA.

Thus, it is respectfully submitted that the method of claim 1 is not anticipated or made obvious by the teachings of Adams and AAPA. For example, Adams in view of AAPA, and Schueller does not teach, disclose or suggest, a limitation that amongst other patentable elements, comprises (illustrative emphasis added) "providing a barrier layer on the protruding feature and the bulk surface carrying a barrier layer; applying a solution of the ink and a solvent to the barrier layer, the barrier layer preventing molecules of the ink from penetrating the elastomeric stamp; removing the solvent from the barrier layer; providing a first substrate with a surface having a higher affinity for the ink than the barrier layer; contacting the contact surface of the protruding feature with the surface of the first substrate; transferring all of the ink from the contact surface of the protruding feature to the surface of the first substrate; removing the elastomeric stamp from the surface of the first substrate such that none of the ink remains on the contact surface of the protruding feature due to the acts of contacting, transferring all of the ink from the contact surface and removing" as recited in claim 1.

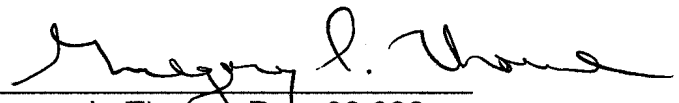
Based on the foregoing, the Applicants respectfully submit that independent claim 1 is patentable over Adams in view of AAPA and Schueller and notice to this effect is

earnestly solicited. Claims 2-4 respectively depend from independent claim 1 and accordingly are allowable for at least this reason as well as for the separately patentable elements contained in each of the claims. Accordingly, separate consideration of each of the dependent claims is respectfully requested.

In addition, Applicants deny any statement, position or averment of the Examiner that is not specifically addressed by the foregoing argument and response. Any rejections and/or points of argument not addressed would appear to be moot in view of the presented remarks. However, the Applicants reserve the right to submit further arguments in support of the above stated position, should that become necessary. No arguments are waived and none of the Examiner's statements are conceded.

In view of the above, it is respectfully submitted that the present application is in condition for allowance, and a Notice of Allowance is earnestly solicited.

Respectfully submitted,

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